

1 29. (New) A system according to claim 28, wherein the communication channel is a multi-
2 carrier communication channel.

1 30. (New) A system according to claim 29, wherein the second-order statistical parameter
2 is a frequency variance of the multi-carrier wireless communication channel.

1 31. (New) A system according to claim 28, wherein the mode selection block selects a
2 communication parameter, generates a target value of said communication parameter, and
3 arranges the modes in said lookup table based on said target value.

1 32. (New) A system according to claim 31, wherein the mode selection block measures a
2 value of said communication parameter in said wireless communication channel, and develops
3 an adjustment to at least one of said first-order statistical parameter and said second-order
4 statistical parameter based on a difference between said measured value and said target value.

REMARKS

This response is provided to the Office Action of December 9th, 2003. In the Action, claims 1-16, 18-20 were rejected under multiple sections of 35 USC, in addition to receiving a provisional, non-statutory double patenting rejection in view of copending patent application 09/665,149, commonly assigned to the Assignee of the above-referenced application.

In order to further prosecution of this matter, Applicant has filed herewith a terminal disclaimer pursuant to 37 CFR §1.321(c) traversing the provisional non-statutory double patenting rejection. Applicant does so while expressly reserving the right to readdress such issue in an appeal, as necessary.

With this response, Applicant has amended claims 1, 9 and 18, cancelled claims 5 and 8 without prejudice, and added new claims 21-32. Support for the amendments and new claims can be found in the original specification, figures and/or claims and, in this regard, no new matter has been introduced. Accordingly, upon entry of this response, claims 1-4, 6, 7, 9-16 and 18-32 are pending.

Thus, in view of the terminal disclaimer filed herewith, the foregoing amendments and the following remarks reconsideration of the above-captioned application is respectfully requested.

Rejection of Claims 1-16 and 18-20: 35 USC §103(a)

In paragraphs 7 and 8 of the Action, claims 1-16 and 18-20 were rejected as being unpatentable over a patent issued to Olofsson, et al. (USP 6,167,031) pursuant to 35 USC §103(a). In response, Applicant has selectively amended the claims, as above, to further distinguish the claimed invention over that of the Olofsson reference.

Applicant maintains the characterization of the Olofsson reference provided in previous responses.

Claims 1 and 18

The claims of the pending application are generally directed to embodiments of a method for constructing mode lookup tables for use by a transceiver to enable timely transitions between different adaptive modulation and channel coding schemes to accommodate changing channel

conditions. More particularly, with reference to, e.g., rejected claim 1, a method for constructing a mode lookup table is presented comprising:

- a) selecting at least one short-term quality parameter associated with the communication channel as received by said receive unit;
- b) determining a first-order statistical parameter of said at least one quality parameter;
- c) determining a second-order statistical parameter of said at least one quality parameter; and
- d) arranging said modes in said lookup table based on said first order statistical parameter and based on said second-order statistical parameter.

Despite the characterization in the Action, Olofsson fails to construct or utilize a mode lookup table for the determination or selection of a modulation and/or channel coding scheme (cumulatively, a mode) based on first- and second-order statistical parameters of a short-term quality parameter as claimed in, e.g., amended claim 1. Rather, Olofsson states that based "on the variances [in the block error rate (BLER)], the system 10 estimates the data throughputs *S* for *all combinations of modulation and channel coding schemes on a RF link*, [and] *switching to a new combination on that RF link provides a higher data throughput S than that provided by the current combination*" (col. 7, lines 8 through 17).

As provided in the background of the pending application, a BLER is not a short-term quality parameter as that term is defined herein. As provided in the background of the pending application, a "system and method taught by Gilbert rely on tracking errors in reception of entire blocks of data..., which requires a significant amount of time. Thus, this method does not permit one to select rapidly and efficiently from a large number of encoding modes to adapt to varying channel conditions, especially in the event of rapid fades as encountered in mobile wireless systems" (e.g., page 3, lines 20-25). In this regard, Applicant respectfully submits that Olofsson

is representative of the problems associated with the prior art to which the claimed invention was developed to overcome.

Accordingly, Olofsson cannot be read as disclosing or suggesting the use of a short-term quality parameter from which to arrange modes within a look-up table for subsequent use. Insofar as the Olofsson reference fails to disclose or suggest that which is claimed in, e.g., amended claim 1, Applicant respectfully requests that the §103(a) rejection thereof be withdrawn.

Applicant has amended claim 18, and new claims 23 and 28 that include the feature of a short-term quality parameter. Accordingly, Applicant respectfully submits that such claims are similarly patentable over the Olofsson reference by extension of the argument above. Thus, Applicant respectfully requests that the rejection of claim 18 be withdrawn.

Applicant notes that claims 2-4, 6, 7, 9-16, 19-22, 24-27 and 29-32 each depend from patentable base claims 1, 18, 23 or 28 and are likewise patentable over the cited references by virtue of at least such dependence. Accordingly, Applicant respectfully requests that the §103(a) rejection of such claims be withdrawn.

CONCLUSION

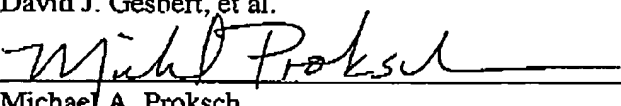
In light of at least the foregoing remarks, Applicant respectfully submits that claims 1-4, 6, 7, 9-16 and 18-32 are in condition for allowance and earnestly requests prompt notice thereof. *Applicant respectfully invites the Examiner to contact the undersigned representative for a telephone conference if it determined that such a conference could lead to allowance of one or more of the pending claims.*

Should it be determined that any additional fee is required, or overage returned, in association with this response, please debit or credit my deposit account number 50-0221 as appropriate.

Respectfully submitted,
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